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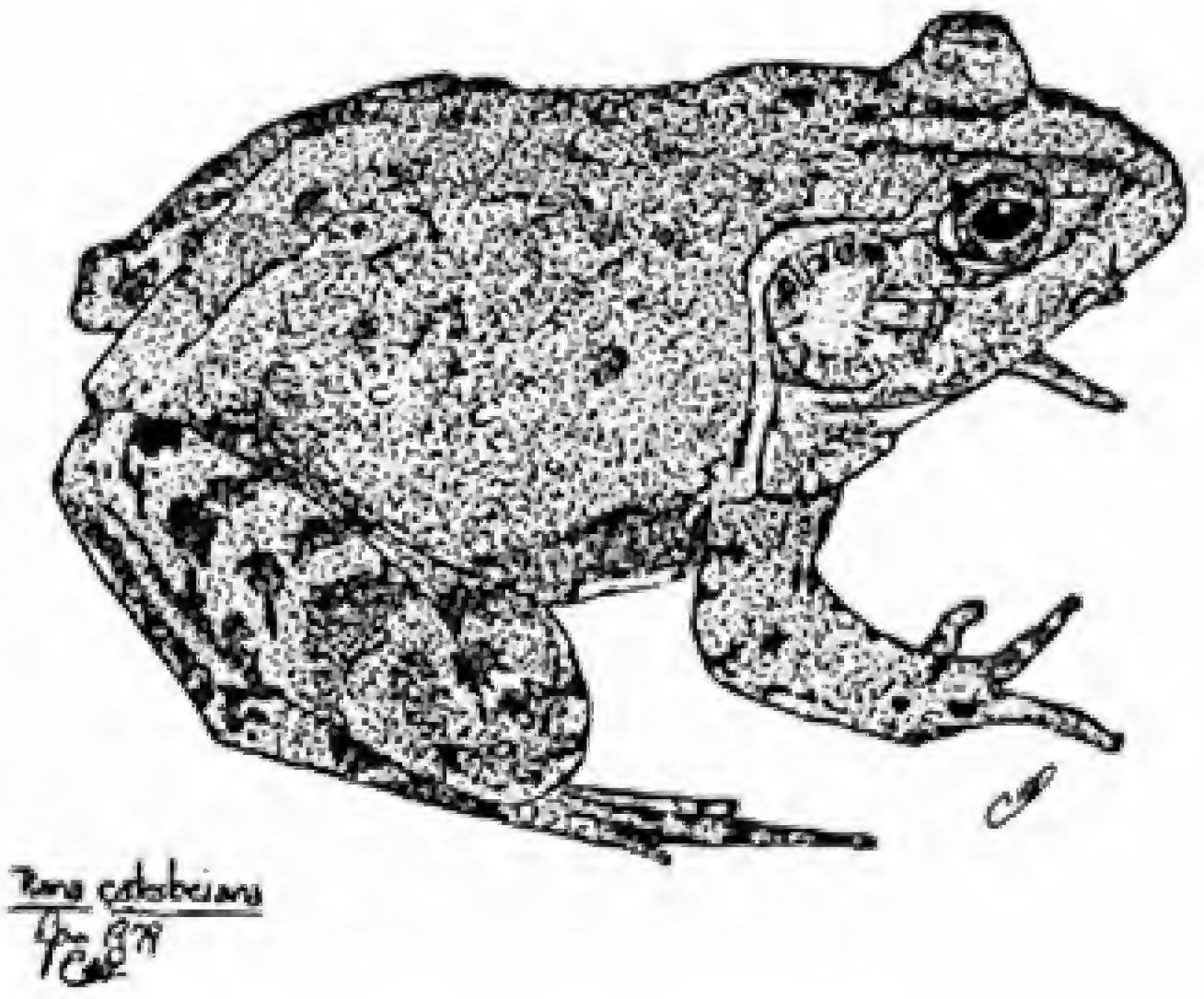

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BULLETIN INFORMATION

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(Editorial policy continued on inside back cover)

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Next Meeting

June 3-5, 2005
Rappahannock River Valley National Wildlife Refuge
Richmond County

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Oak Toad (*Bufo quercicus*)

Photo by Steven M. Roble

Opportunistic Surveys for the Oak Toad (*Bufo quercicus*) in Southeastern Virginia: On the Trail of Leslie Burger

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Introduction

The oak toad (*Bufo quercicus*) is the smallest toad in North America and the rarest toad in Virginia, where it reaches its northern range limit (Pague and Mitchell, 1987; Pague, 1991). Pague and Mitchell (1987) categorized *B. quercicus* as "Rare" in Virginia, whereas Pague (1991) suggested a status of "Special Concern," noting that the species might be declining in the state. It is currently classified as a Species of Special Concern by the Virginia Department of Game and Inland Fisheries (Mitchell & Reay, 1999). The range of *B. quercicus* in Virginia is limited to a few verified localities south of the James River from the Dismal Swamp region west to the Fall Line (Mitchell & Reay, 1999). This species apparently does not occur east of the Suffolk Escarpment (J. C. Mitchell, pers. comm.).

Ashton and Franz (1979) cited Dunn (1920) and Rageot (1969) as the only published records of *B. quercicus* in Virginia. However, a review of Dunn's (1920) paper reveals that it only contains brief accounts for *B. americanus* and *B. fowleri*, with no mention of *B. quercicus*. Also, Wright and Wright (1949) cited the range of *B. quercicus* as "North Carolina to Florida west to Louisiana" and Burger (1958) did not include this species in his checklist of the Virginia herpetofauna. Rageot (1969) briefly discussed two calling males (both were captured but apparently only one was collected) of *B. quercicus* that were found at sites about 5 km (3 mi) apart near Spring Grove, Surry County on 4-5 August 1969.

In the original Virginia herpetological atlas, Tobey (1985) plotted only four localities for *B. quercicus*. The text accompanying his map reads "E. R. Dunn first recorded the Oak Toad from Bower's Hill, Portsmouth in 1920. M. J. Clifford collected it nearby in 1964-1965 (specimen USNM #157-808); W. L. Burger found it in Southampton and Sussex counties in

1959-1960 (VPI&SU/AMNH); R. H. (de) Rageot collected it near Spring Grove, Surry Co., (1969) specimen USNM #167-142 in NMNH." As noted above, the Dunn reference is apparently in error and Tobey (1985) only plotted one of Rageot's two sites. In addition to Mike Clifford's Smithsonian (USNM) specimen (collected 18 July 1965) cited by Tobey, the herpetological collection of the American Museum of Natural History contains a male *B. quercicus* (AMNH 75295; 25.6 mm SVL) collected by Clifford on 20 June 1965 in Chesapeake, 0.5 mi NNW of the junction of routes 337 and 191. This is the same area as the Bower's Hill site. The tag on the AMNH specimen indicates that it was identified (or at least verified) by Roger Conant and represented the first record of the species for Virginia; the latter annotation is incorrect.

Schwab (1984) reported that he found *B. quercicus* once in the Virginia portion of the Great Dismal Swamp (western edge), but Mitchell et al. (2000) noted that the specimen (observed on 4 April 1974) was not collected, some doubt existed regarding its identification, and there were no additional records from the Virginia portion of the swamp.

Pague and Mitchell (1987) reported that *B. quercicus* "is apparently uncommon throughout the Coastal Plain of Virginia south of the James River where it is known from six widely separated localities. Repeated collecting attempts have yielded very few specimens." They also remarked that urbanization in southeastern Virginia (particularly the south Hampton Roads area) may negatively impact this species.

Pague (1991) stated that *B. quercicus* is "extremely rare in Virginia" and that it "is restricted to open pine or pine-oak woods habitat which is moderately threatened by logging and development." Conversion of natural stands of pine and pine-oak to dense monocultures of loblolly pine (and the draining of wetlands in the forests) was cited as a major threat to the species. Pague (1991) indicated that *B. quercicus* was known in Virginia from six sites in five counties (Brunswick, Greensville, and Surry counties, and the cities of Chesapeake and Suffolk) and noted that most calling in the state had been documented in August after heavy rains. He also cited a paucity of Virginia records in the preceding two decades (i.e., since Rageot's 1969 records), stating that "intensive surveys of anuran populations in southeastern Virginia have yielded only a single calling male." The latter comment was in reference to a male collected by

Pague and R. T. Turner on 30 June 1986 in the City of Suffolk (west of the Dismal Swamp) (Carnegie Museum specimen #148146). David A. Young also collected one *B. quercicus* on 16 August 1988 at the US Route 258 crossing of the Nottoway River in southeastern Southampton County (CM #136780); this record has not been published until now.

We (and J. C. Mitchell, pers. comm.) are not aware of any confirmed records of *B. quercicus* in Virginia during the period from 1989 to 2002. The preliminary summary of the 1997 VHS spring survey of the Naval Security Group Activity Northwest property in the City of Chesapeake listed *B. quercicus* as one of the documented species (Anonymous, 1997), but it was not included in the final survey report (Pinder, 1998). Presumably, the original report was in error (this site is well east of the Suffolk Escarpment).

The recent herpetological atlas prepared by Mitchell & Reay (1999) shows six records for *B. quercicus* in Virginia, including one site each in the City of Chesapeake and Greensville, Southampton, and Surry counties, and two sites in the City of Suffolk (we do not know the origin or validity of their locality in northern Suffolk). These authors plotted only two of the four records in Tobey's (1985) atlas and they (as well as Hoffman and Mitchell, 1996) did not mention the Brunswick County record listed by Pague (1991).

Historical Records of W. Leslie Burger

W. Leslie Burger (1925-1988) was one of the most active field herpetologists in Virginia during the late 1950s and early 1960s (Mitchell, 1994). He served as the second president of the Virginia Herpetological Society during this period. His relatively few publications include a checklist of the state's herpetofauna (Burger, 1958). He also left behind four unpublished manuscripts on the Virginia fauna (Mitchell, 1994; Burger's files pertaining to Virginia are currently in the possession of J. C. Mitchell). Burger's numerous voucher specimens of Virginia amphibians and reptiles were originally deposited in the herpetological collection at Virginia Tech (VPI&SU). Unfortunately, some of his valuable specimens (and those of other collectors) were lost or destroyed during two (or more) on-campus relocations of this collection during the next several decades (J. C. Mitchell, pers. comm.). The remaining

specimens in the VPI&SU collection were transferred in May 1985 to the American Museum of Natural History in New York. Several other significant distributional records that are mentioned in Burger's unpublished notes and manuscripts are not supported by voucher specimens because he did not always collect specimens (e.g., *Hyla gratiosa* record cited below).

Contrary to the reports by Ashton and Franz (1979) and Tobey (1985), Burger (rather than E. R. Dunn) apparently was the first person to collect *B. quercicus* in Virginia (see also Rageot, 1969). Hoffman and Mitchell (1996) noted that the only vouchered record of this species for Greensville County is based on a specimen (AMNH 122617) collected by Burger on 29 July 1960 near Barley in the southwestern corner of that county. The specimen is an adult male (25.9 mm SVL) that was actually collected by Leslie Burger and Ronald H. Burger. It is likely just one of a larger series of specimens that was originally collected on that date (see below). Leslie Burger also collected a gravid female (AMNH 126033; 27.7 mm SVL) of *B. quercicus* on 11 July 1960 near Branchville in extreme southwestern Southampton County. Both of these records are included in Mitchell and Reay (1999), but his records for Sussex (vicinity of Littleton) and Southampton (vicinity of Sebrell) that were plotted by Tobey (1985) are not. Apparently, there are no extant specimens from either of the latter two sites (see below). Burger may also be responsible for the Brunswick County record of *B. quercicus* that was plotted by Pague (1991) but is lacking from both of the Virginia herpetological atlases (Tobey, 1985; Mitchell and Reay, 1999). Details of this record are unknown to us (no voucher specimens in AMNH), but the locality (vicinity of Triplet, an area collected by Burger and several colleagues) is in the southeastern portion of the county (J. C. Mitchell, unpublished range map), just west of the site near Barley in Greensville County.

Burger's unpublished notes and manuscripts include a discussion of a historical record of *Hyla gratiosa* from Littleton (Sussex Co.) that was plotted by Tobey (1985) but not Pague and Young (1991) or Mitchell and Reay (1999). Pague and Young (1991) noted that there were unsubstantiated reports of this species from Greensville, Sussex, and Southampton counties, possibly in reference to Burger's historical surveys. The following is an excerpt from an undated account (partly handwritten and partly typewritten) on *H. gratiosa* drafted by Burger that

describes his discovery of the first Virginia population of this species and (at the time) the northeasternmost known locality rangewide [brackets added by authors]:

> "None collected. Although the Barking Treefrog has not been collected in the study area it is fairly abundant about 45 miles northeast of Triplet at Littleton, Sussex County. This locality is the first recorded in Virginia. Undoubtedly this frog occurs elsewhere in the Coastal Plain portion of the drainage of the Blackwater River and perhaps also of the Nottoway and Meher[r]in rivers.
>
> Since this record constitutes the northeasternmost record of the species, details of its discovery are notable. During the summer of 1959 five relatively unsuccessful collecting trips were made to the vicinity of Littleton during and after rains. On the evening of July 21, 1959 I ventured forth again after a cloudburst. South of the James River at Jamestown, frequent choruses of Greenfrogs (*Rana clamitans melanota*), Cricket Frogs (*Acris gryllus*), Gray Treefrogs (*Hyla versicolor versicolor*) [= *H. chrysoscelis*], and Pine Woods Treefrogs (*Hyla femoralis*) were investigated. About 9:30 P.M., I approached Littleton from the north on Virginia Highway 35. Three-quarters of a mile north of Littleton I heard a frog chorus remarkable even in anuran-rich southeastern Virginia. From a shallow weed-filled pond came the characteristic bark of about 50 *Hyla gratiosa*, mixed with the vocal efforts of nine other anurans. The *gratiosa* were floating at intervals of 10 or more feet from one another in water from 1 to 2½ feet in depth. The pond included a flooded part of a corn field, although clumps of willows in its deepest middle portion apparently represented a permanently marshy area. Neither females nor eggs of *Hyla gratiosa* were seen.
>
> The noise of Barking Treefrogs was a part of a tremendous discordant mixture of sounds. The chirping of *Acris gryllus* and *Hyla femoralis* was on every hand, for there were hundreds of each. *Hyla versicolor versicolor* [= *H. chrysoscelis*], *Rana pipiens sphenocephala* [=*R. sphenocephala*], *Rana clamitans melanota*, *Rana catesbeiana*, and *Gastrophryne carolinensis* were calling in smaller numbers. One individual each of *Hyla squirella* and *Bufo quercicus* were heard and captured. Reluctantly I departed from this musicale shortly after midnight.
>
> At 11:25 P.M. on July 28, 1959, I drove by the spot with time only to stop and listen. Again *Hyla gratiosa* was in full chorus. On several rainy summer evenings during 1960 I went to this pond. Ditching and tiling had reduced the water level and no *gratiosa* were in evidence."

The above narrative documents that Burger heard and captured one *B. quercicus* at the Littleton site, apparently the first Virginia record of this species (as well as *H. gratiosa*) (see also Rageot, 1969). However, the specimen no longer exists. Burger's unpublished (and again, undated) notes on *B. quercicus* include the following remarks about this specimen and his other records of this species in the state:

> "It was calling from the ground beside a cluster of corn stalks, where the shallow margin of the pond had encroached on a corn field. No others were seen or heard that evening, but a week later on the evening of July 28 [1959], I captured one male and heard two others calling in a flooded ditch ½ mile north of Sebrell (about 6 miles north of Courtland), Southampton County, Virginia. This locality is about 9 miles south of Littleton. On the way north that evening when I stopped briefly at Littleton no Oak Toads were calling from the pond where the first one was captured.
>
> While collecting in the same part of Virginia during 1960, I was surprised to hear large choruses and collect good series in several localities. On July 29 after a heavy rain from Tropical Storm Brenda, large numbers of Oak Toads were heard calling and several specimens were collected in the stretch of Piedmont from Barley to Turner's Crossroads (west of Emporia in the southern border of Greensville County). On the following evening they were heard there again, but on neither evening were any heard in adjacent portions of southern Brunswick and southern Southampton County. On August 10, when Deane Estes, Ronald H. Burger, and I were in northeastern Sussex County, large choruses were heard (and series collected) in several localities between Waverly and Wakefield and several individuals were collected 1½ miles north of Sebrell, accompanying a large chorus of *Limnaoedus* [= *Pseudacris*] *ocularis*."

Apparently, only two of Burger's numerous specimens of *B. quercicus* still exist (both in AMNH as discussed above). Note that he actually mentioned two collecting sites for *B. quercicus* north of Sebrell, approximately one mile (1.6 km) apart. Also, details concerning the "several localities between Waverly and Wakefield" (US Route 460 connects these towns which are 13 km [8 mi] apart) are apparently lost forever (none of these sites was mapped in either of the Virginia herpetological atlases). Finally, the above narrative did not mention Burger's observations and collections made on 11 July 1960 in southwestern Southampton County.

The following report summarizes the results of field surveys that we conducted for calling anurans during three nights in mid-summer 2003 after the fortuitous discovery of calling males of *B. quercicus* by the first author. Cognizant of the fact that Burger's historical records of *B. quercicus* and *H. gratiosa* from the Littleton-Sebrell area, as well as his Greensville (and possible Brunswick) County record of *B. quercicus*, either had not been substantiated or recently confirmed, we seized this opportunity to obtain distributional data on the anuran fauna of the region. We had traveled through the Littleton-Sebrell area on a number of

previous occasions, mostly in search of *H. gratiosa*, but had never noted the level of anuran activity documented below.

Survey Dates and Locations

The first survey was brief, lasting slightly more than one-half hour (2050 to 2125 h) on 30 June 2003. It was initiated when SMR heard the unmistakable call of a male *B. quercicus* along VA Route 35 between Littleton and Sebrell while traveling enroute from Richmond to Suffolk. This serendipitous event was at least partly facilitated by a malfunctioning air conditioner in the vehicle, which had resulted in the driver's side window being rolled down and thus open to external sound. Weather conditions at the time included an air temperature of about 24° C (75 ° F), partly cloudy skies, and there was evidence of recent rain. The survey was limited to areas along Route 35 near the Sussex-Southampton county line. Another notable species heard during this survey was *Pseudacris ocularis*. Following the brief survey, SMR continued on to Suffolk, where he remained through the next day (1 July).

Tropical Storm Bill passed through southeastern Virginia on 1-2 July, producing heavy thunderstorms on the night of 1 July and continuing into 2 July. Local precipitation totals were in the range of 3-8 cm, resulting in some flooding of agricultural fields and low-lying areas (including portions of County Route 653 in Southampton County). Starting at 1845 h on 2 July and continuing until 0200 h on 3 July, all three authors jointly participated in anuran call surveys that began in central Prince George County and extended south to the Littleton-Sebrell area. We did not reach the latter area until midnight, but many anurans were still actively calling at that time. The air temperature at 1845 h was about 20° C (68° F) and skies were overcast. Temperatures had only dropped a degree or two by 2015 h and skies were still overcast. A thunderstorm with heavy rain began at 2030 h. Skies were clear by 2215 h, but the temperature remained stable. Intermittent light to moderate rain fell during the next several hours. Skies were clear again by 0115 h on 3 July, and the temperature had again dropped a few more degrees to about 16° C (60° F).

The last survey was conducted on the following night (3 July), when SMR visited portions of western Greensville County (2145 h to 0130 h on 4 July), followed by one hour in eastern Brunswick County. The air

temperature at 2145 h was about 23° C (73° F); it had rained earlier in the day but did not rain during the evening surveys. By 2230 h, the air temperature had dropped to about 18.5° C (65° F) and skies were partly cloudy. When the survey ended at 0230 h on 4 July, the temperature was about 17° C (62-63° F) and skies were mostly clear.

SMR took field notes for all surveys (and prepared this report), usually recording all species present along the various routes traveled and occasionally estimating chorus sizes, especially for the rare or uncommon species. The presence of especially large or intense choruses was generally noted. We did not obtain tape or digital recordings, but did collect a few selected voucher specimens (all but one are deposited in the Virginia Museum of Natural History but they are currently uncatalogued). During the course of the three nights, we heard one or more species of anurans at a total of 65 "sites" (see Table 1). In some instances, we combined potentially distinct sites along the same road if only one or two common species were present. Sites along roads with greater anuran species diversity (including rare or uncommon species) and/or more wetlands were often defined more finely (e.g., every 0.25 km).

Results

We recorded a total of 17 anuran species, 15 of which were heard at one or more sites. The spring-breeding *Pseudacris crucifer* and *P. feriarum* were only represented by non-calling specimens found live or dead on roads. We found all 17 species on the night of 2 July (Prince George, Sussex, and Southampton counties), whereas only ten species were recorded on the following night (Greensville County). Several county records were documented by voucher specimens, but some others are unvouchered records.

Seven or more anuran species were recorded at eight of the 65 sites (Table 1). The site with the highest diversity (10 species) was along County Route 653 in Southampton County near its intersection with VA Route 35; low-lying portions of this road and adjacent agricultural fields were flooded. Three mating pairs of *Hyla squirella* and one of *Gastrophryne carolinensis,* plus numerous *Bufo* (presumably *B. fowleri*) tadpoles, were noted in the flooded portion of the road from 0115-0135 h on 3 July. This site is approximately 1 km north of Sebrell. A 3.2 km

(2 mi) section of County Route 625 in Prince George County supported 11 species, including the two post-breeding *Pseudacris*. In addition to many calling males of various species (primarily in clearcut areas), more than 50 anurans (mostly AOR, but some DOR) of eight species were observed on this road between 2100 h and 2130 h after a heavy rain. Nine anuran species were recorded at two other sites (one each in Sussex and Southampton counties).

No salamanders were observed crossing roads or DOR during our surveys. The only snake we encountered was a DOR adult *Nerodia erythrogaster* found on 2 July along VA Route 35 in Southampton County, 3 km south of the Sussex Co. line (specimen not saved). Although not previously documented in this area, this species has been recorded at 3-4 other sites in Southampton County (Mitchell, 1994; Mitchell and Reay, 1999).

The following annotated checklist briefly summarizes our records for each anuran species. Detailed locality data are provided in Table 1.

Annotated Checklist

1. Northern Cricket Frog (*Acris crepitans*) [16 sites]

Eight of the sites were in Greensville County and only one in Southampton County. The remaining sites were in Prince George and Sussex counties.

2. Southern Cricket Frog (*Acris gryllus*) [10 sites]

Although known from all counties in the region, the range map in Mitchell and Reay (1999) lacks records of *A. gryllus* for most of the area that we surveyed, presumably due to limited previous sampling (exclusive of Burger's efforts) of this anuran-rich region. Both cricket frogs were heard at five sites (Table 1).

3. American Toad (*Bufo americanus*) [6 sites]

American toads were found in all counties except Greensville. As previously reported by Roble (2000) and Roble and Hobson (2001), the

range of this species extends farther southeast in Virginia than indicated by Mitchell and Reay (1999).

4. Fowler's Toad (*Bufo fowleri*) [28 sites]

Fowler's toads were commonly encountered throughout our survey areas. Toad tadpoles observed in road ruts along County Route 625 in Prince George County and a flooded section of County Route 653 in Southampton County were presumably this species. Two AOR specimens were collected.

5. Oak Toad (*Bufo quercicus*) [18 sites]

Oak toads were heard at 18 sites, 17 of which were along or near VA Route 35 on either side of the Sussex-Southampton County line. The sites spanned a distance of 10.3 km (6.4 mi) along this road, ranging from 2.9 km north of the county line [= 1.3 km SE Barretts Store] south to 0.3 km north of Sebrell (jct. routes 35 and 747). These sites potentially included both of Burger's historical localities near Sebrell, but his Littleton site is about 4 km (2.5 mi) north of our northernmost site. Most of the *B. quercicus* "choruses" that we heard contained just one or two males. During the brief survey on 30 June, SMR heard a total of 6-7 calling males at six distinct sites along VA Route 35; one male was collected while calling beside a small pool at the edge of a bean field along this road in Southampton Co., 3.25 km south of the Sussex County line. On the night of 2 July (all observations were made after midnight), we heard males of *B. quercicus* calling at 14 sites along or near VA Route 35 in the same general area that was surveyed two nights earlier. Five of these choruses contained at least five males; our estimates of chorus size for these sites were 5, 5-7, 5-10 (2 sites), and 15-20. The estimated total number of calling males heard at all sites on that night ranged from 49 to 68, undoubtedly the most individuals recorded in Virginia since Burger's surveys of the late 1950s and early 1960s. Oak toads were calling in flooded agricultural fields, grassy/weedy fields, and clearcut areas.

We discovered a new population of *B. quercicus* on 2 July 2003 along County Route 621 in Sussex County, north of The Nature Conservancy's Piney Grove Preserve. At least five males were calling (one collected) in and near shallow pools in a clearcut bordering the road. This site is

approximately 6 km SSE of Waverly and 7 km WNW of Wakefield, thus partially corroborating Burger's unpublished historical records of *B. quercicus* at (unspecified) sites between Waverly and Wakefield in northeastern Sussex County.

This species was sought but not found by SMR in western Greensville County and southeastern Brunswick County on the night of 3 July. The area near Barley (where Burger found this species) was not reached until after midnight, and it appeared to be more heavily developed with residential dwellings (especially along County Route 627, which had few fields or forests bordering it) than other portions of the county. Hoffman and Mitchell (1996) also failed to reconfirm the existence of *B. quercicus* in this county. Additional surveys for this species in the area are warranted.

6. Southern Toad (*Bufo terrestris*) [1 site]

One male was heard on 2 July near the junction of VA Route 35 and County Route 653 in Southampton County. Mitchell and Reay (1999) plotted a record for *B. terrestris* at or near this vicinity, their only one for the county.

7. Eastern Narrow-mouthed Toad (*Gastrophryne carolinensis*) [28 sites]

Narrow-mouthed toads were commonly heard during our surveys, with records for all four counties. The range map in Mitchell and Reay (1999) lacks records of *G. carolinensis* for most of the area that we surveyed (including no records for Sussex County), undoubtedly the result of a sampling artifact (and the loss of some Burger specimens). Jeffreys (2004) and Mitchell and Buhlmann (2005) recently documented this species in Sussex County.

8. Cope's Gray Treefrog (*Hyla chrysoscelis*) [26 sites]

Like the preceding species, the range map in Mitchell and Reay (1999) lacks records of *H. chrysoscelis* for most of the area that we surveyed. This species was widespread in the survey areas, although few large choruses were noted. One male with a *Hyla versicolor*-like call (and possibly that species) was heard along Route 614 in Greensville County.

Mitchell and Reay (1999) indicate that the nearest confirmed locality for *H. versicolor* is in western Brunswick County.

9. Green Treefrog (*Hyla cinerea*) [5 sites]

Green treefrogs were heard at five sites, including one each in Greensville and Prince George counties and three in Southampton County (Table 1), although only one to several males were calling at most sites. The range map in Mitchell and Reay (1999) lacks records of *H. cinerea* for Prince George, Sussex, and Southampton counties. Jeffreys (2005) recently documented this species in the City of Hopewell. We heard several males calling before dusk at a large open marsh (with abundant buttonbush, pickerelweed, etc.) along County Route 629, just north of VA Route 10 in Prince George County. On the night of 3 July, SMR heard one male and collected another AOR along County Route 650, 0.9 km N jct. County Route 621 in Greensville County. This represents a western range extension of 5.6 km (3.5 mi) for this species in Virginia and is the first record west of Interstate Route 95 in Greensville County (Hoffman and Mitchell, 1996; Mitchell and Reay, 1999; Gibson and White, 2004).

10. Pine Woods Treefrog (*Hyla femoralis*) [18 sites]

The range map in Mitchell and Reay (1999) lacks records of *H. femoralis* for Prince George and Sussex counties, but Tobey (1985) credits Leslie Burger for a Prince George County record (apparently unvouchered) and Susan Watson (pers. comm.; unvouchered 2004 record) has also heard this species in that county. We heard calling males at three sites along County Route 625 in Prince George County and also observed but did not collect several live adults on this road. The species was also heard at five sites in Sussex County, three in Southampton County, and six in Greensville County (Table 1). Several large choruses were heard but no vouchers were collected.

11. Squirrel Treefrog (*Hyla squirella*) [17 sites]

We heard squirrel treefrogs at 17 sites, including six each in Greensville and Southampton counties and five in Sussex County. As was true for the preceding species, several large choruses were heard but no vouchers were collected. The range map in Mitchell and Reay (1999) lacks records

of *H. squirella* for Sussex County and shows only two records for Southampton County (but none in the areas we surveyed) and one in Greensville County. The latter is a recent "VDGIF permit collection report" record near Emporia. Inexplicably, records of *H. squirella* obtained on 29 July 1960 by W. L. Burger and R. H. Burger from two sites in the southwestern portion of Greensville County (3 miles NE and 3 miles SE of Barley) were not mapped by Mitchell and Reay (1999) even though specimens exist (AMNH 123214-123220). Hoffman and Mitchell (1996) also discussed these specimens plus four other Greensville County records. SMR heard a large chorus of this species at what was likely the southernmost of the two Burger sites (marsh near junction of County Routes 603 and 633) at 0030 h on 4 July 2003.

12. Spring Peeper (*Pseudacris crucifer*) [2 sites]

Spring peepers were found at several sites along County Route 625 northeast of Disputanta in Prince George County, including numerous AOR recent metamorphs and several AOR and DOR adults. A DOR adult was collected in the flooded section of County Route 653 in Southampton County. No calls were heard during our surveys.

13. Upland Chorus Frog (*Pseudacris feriarum feriarum*) [1 site]

One adult was collected along County Route 625 near Disputanta in Prince George County (Texas Memorial Museum, TNHC #63644). In addition to *P. crucifer* and *P. feriarum*, both *P. brimleyi* and *P. nigrita* are known from this vicinity (Hobson and Moriarty, 2003), thus qualifying this area as one of the most diverse *Pseudacris* sites in Virginia.

14. Little Grass Frog (*Pseudacris ocularis*) [9 sites]

Chorusing males were heard at nine sites, all along or near VA Route 35 near the Sussex-Southampton county line (Table 1). The species was detected at only one site on the Sussex County side of the line. It proved difficult to estimate chorus size for this species. We collected one of about five males that were calling on the night of 2 July 2003 in a grassy roadside wetland along County Route 648, 0.4 km W jct. VA Route 35 [= ca. 4 km N Sebrell] in Southampton County. Mitchell and Reay (1999) plotted seven records for *P. ocularis* in Virginia, including one in Surry

County and six more in the cities of Chesapeake and Suffolk. Pinder (1998) reported this species from another site in the City of Chesapeake. and we are aware of additional populations to the west (Roble and Hobson, unpub. data). Burger's four unvouchered, historical records (Sussex, Southampton [2 sites], and Mecklenburg counties) were plotted by Tobey (1985), but not Mitchell and Reay (1999). Mitchell and Pague (1987) stressed the need to verify the Mecklenburg County record in particular because it was at the edge of the species' range. Our observations essentially confirm Burger's record for Sussex County (but no voucher was collected) and one of his Southampton County records. The record mapped by Franz and Chantell (1978) and Tobey (1985) for the Back Bay area of the City of Virginia Beach was based on a misidentified juvenile *Hyla squirella* (reidentified by C. A. Pague; Division of Natural Heritage database). Pague and Mitchell (1991) did not include this species (nor mention the erroneous record) in their checklist of the herpetofauna of the Back Bay area.

15. American Bullfrog (*Rana catesbeiana*) [2 sites]

Bullfrogs were heard at only two sites.

16. Green Frog (*Rana clamitans*) [5 sites]

Green frogs were heard at five sites. Mitchell and Reay (1999) lacked records of *R. clamitans* for Southampton County, where two of our records were obtained (but no vouchers were collected).

17. Southern Leopard Frog (*Rana sphenocephala*) [5 sites]

Leopard frogs were calling at four of the five sites.

Discussion

Our total of 17 species on the night of 2 July 2003 likely ranks as one of the most successful anuran surveys in the history of Virginia herpetology. This represents two-thirds of the 26 species recorded from the state (Mitchell and Reay, 1999; Hobson and Moriarty, 2003). Hoffman and Mitchell (1996) remarked that "Dr. [Leslie] Burger enjoyed a still unparalleled success with frog captures and obtained no fewer than 11

species" in Greensville County on 29-30 May 1960. SMR recorded 10 species (of 17 confirmed; Hoffman and Mitchell, 1996) in this county on the night of 3 July 2003. The range maps in Mitchell and Reay (1999) indicated a dearth of records for anurans for most of the area that we surveyed in Sussex and Southampton counties, presumably due largely to the loss of Burger's historical specimens and limited subsequent sampling of this anuran-rich region. Hoffman and Mitchell (1996) noted that the western part of Greensville County, where surveys were conducted on 3 July 2003, was poorly sampled for anurans.

Three species were conspicuously absent during our surveys. These species are *Hyla gratiosa*, *Scaphiopus holbrookii* and *Rana virgatipes; Rana palustris* also was not recorded, but its breeding season was likely finished (as were those of several *Pseudacris* species that we did not find). Presumably, the *H. gratiosa* population discovered by Burger near Littleton is extirpated, probably as a result of the ditching and draining noted by him more than 40 years ago. Recent surveys in this area have not yielded this species. We have heard *R. virgatipes* calling at the Piney Grove Preserve (The Nature Conservancy) in Sussex County on previous visits, but did not detect it during the surveys discussed in this paper. The complete absence of *Scaphiopus holbrookii* during our surveys despite plentiful rainfall during that week was surprising. Mitchell & Reay (1999) lacked records for Sussex County, but this species was recently documented at the Chub Sandhill Natural Area Preserve in the southern portion of the county (Hobson and Erdle, 2005).

Following the fortuitous discovery of several calling males of *Bufo quercicus*, our surveys were able to largely corroborate Leslie Burger's historical reports of this rare toad from the Littleton-Sebrell area of Sussex and Southampton counties after an intervening period of more than four decades without any records. We also discovered a population of this species in northeastern Sussex County near another area where Burger recorded it many years ago. Apparently, the lack of success in reconfirming these important records was due to limited sampling and/or sampling during suboptimal conditions. Wright and Wright (1949) remarked that "It takes a heavy warm rain to start these little toads calling vigorously." Pague (1991) also noted the importance of heavy rains and Burger's unpublished notes refer to heavy rains associated with a tropical storm. Unfortunately, many of Burger's voucher specimens that were

intended to document specific collecting sites and dates for *B. quercicus* (and other species) are permanently lost. Also, his notes mostly contain qualitative rather than quantitative information on chorus sizes, thus making it difficult to assess the degree to which populations of this species may have changed over time. Pague (1991) noted that *B. quercicus* may be declining in Virginia. Additional surveys for breeding populations throughout the southeastern portion of the state, especially after warm heavy rains, are clearly warranted.

Acknowledgments

We thank Joseph C. Mitchell for providing copies of selected portions of Leslie Burger's unpublished notes and manuscripts, for checking several literature references and museum records, and for reviewing a preliminary draft of this paper. Linda S. Ford and David A. Dickey of the American Museum of Natural History facilitated Roble's visit to the collection and conducted database searches for selected Virginia records. Stephen P. Rogers graciously provided data on Virginia specimens of *Bufo quercicus* in the Carnegie Museum of Natural History collection on extremely short notice.

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Table 1. Summary of observation sites (county totals in parentheses) and species[1] recorded on 30 June and 2-3 July 2003.
X = adults observed or heard; T = tadpoles only; L = presence of a large chorus was noted; C = voucher specimen collected.

County	Site[2]	Ac	Ag	Ba	Bf	Bq	Bt	Gc	Hch	Hci	Hf	Hs	Pc	Pf	Po	Rca	Rcl	Rs
Prince George (11)	Rt. 460 to Rt. 610 west*							X										
	Rt. 839, S jct. Rt. 10*	X						X	X									
	Rt. 629, N jct Rt. 10 (large marsh)	X						X		X							X	
	Rt. 629, James River NWR							X										
	Jct. Rt. 10 x 614								X									
	Rt. 614, N jct. Rt.10	X																
	Rt. 625, 1.4 km S jct. Rt. 611	X	X		T			X	X		X						X	
	Rt. 625, 2.5 km S jct. Rt. 611	X	X					X			X							
	Rt. 625, 2.7 km S jct. Rt. 611				X			X	X		X							
	Rt. 625, E of Blackwater Swamp			X	X			X	X		X		X	C				X
	Jct. Rt. 340 x 156				X				X									
Sussex (9)	Rt. 614, 0.2 km E jct. Rt. 606	X			X				X		L							
	Jct. Rt. 606 x 621			X	X			X	X		X							
	Rt. 621, Harrells Pond	X	X		X			X	X								X	
	Rt. 621, E jct. Rt. 633							X	X			X						
	Rt. 621, 0.8 km W jct. Rt. 604	X	X	X	X	C		X	X		X	X						
	Rt. 604, Piney Grove Preserve*				X			L	X		L							X
	Jct. Rt. 35 x 622 (= Littleton)								L			L						
	Rt. 35, 1.3 km SE Barretts Store				X	X			X			X						
	Rt. 35, 1.4 km N Southampton Co.					X		X	X		X	X			X	X		

[1]Species abbreviations: Ac = *Acris crepitans*, Ag = *A. gryllus*, Ba = *Bufo americanus*, Bf = *B. fowleri*, Bq = *B. quercicus*, Bt = *B. terrestris*, Gc = *Gastrophryne carolinensis*, Hch = *Hyla chrysoscelis*, Hci = *H. cinerea*, Hf = *H. femoralis*, Hs = *H. squirella*, Pc = *Pseudacris cruicifer*, Pf = *P. f. feriarum*, Po = *P. ocularis*, Rca = *Rana catesbeiana*, Rcl = *R. clamitans*, Rs = *R. sphenocephala*.

[2] An asterisk signifies that several "sites" were combined under this larger site name.

Table 1 (continued). Summary of observation sites (county totals in parentheses) and species[1] recorded on 30 June and 2-3 July 2003. X = adults observed or heard; T = tadpoles only; L = presence of a large chorus was noted; C = voucher specimen collected.

County	Site[2]	Ac	Ag	Ba	Bf	Bq	Bt	Gc	Hch	Hci	Hf	Hs	Pc	Pf	Po	Rca	Rcl	Rs
South-ampton (21)	Jct. Rt. 35 x 607 west			C				X	X			X						
	Rt. 35, 0.3 km S jct. Rt. 607 west					X												
	Rt. 35, 1.9 km N jct. Rt. 648														X			
	Rt. 35, 1.3 km N jct. Rt. 648					X									X			
	Rt. 35, 1.1 km N jct. Rt. 648					X												
	Rt. 35, 1.0 km N jct. Rt. 648					X												
	Rt. 35, 0.5 km N jct. Rt. 648					C												
	Rt. 35, near jct. Rt. 607 E							X	X		X	X						
	Rt. 35, 0.1 km N jct. Rt. 648					X												
	Rt. 648, 0.4 km W jct. Rt. 35											X			C			
	Rt. 648, 0.8 km W jct Rt. 35		X			X					X				L			X
	Rt. 648, 1.2 km W jct. Rt. 35		X			X			X	X	X	X			X			X
	Rt. 35, 0.3 km S jct. Rt. 648					X												
	Rt. 35, 0.6 km S jct. Rt. 648														X			
	Rt. 35, 2.1 km N jct. Rt. 653														X			
	Rt. 35, 1.8 km N jct. Rt. 653					X									X			
	Rt. 35, 1.4 km N jct. Rt. 653					X												
	Rt. 35, 0.8 km N jct. Rt. 653					X												
	Rt. 35, 0.3 km N jct. Rt. 653					X												
	Rt. 653, 0.2 km S jct. Rt. 35 - flooded fields and part of road		C	C	X	X	X	X	X	X		L	C					
	Jct. Rt. 35 x 719	X	X	X	X	X			X	X		X						X

[1]Species abbreviations: Ac = *Acris crepitans*, Ag = *A. gryllus*, Ba = *Bufo americanus*, Bf = *B. fowleri*, Bq = *B. quercicus*, Bt = *B. terrestris*, Gc = *Gastrophryne carolinensis*, Hch = *Hyla chrysoscelis*, Hci = *H. cinerea*, Hf = *H. femoralis*, Hs = *H. squirella*, Pc = *Pseudacris crucifer*, Pf = *P. f. feriarum*, Po = *P. ocularis*, Rca = *Rana catesbeiana*, Rcl = *R. clamitans*, Rs = *R. sphenocephala*.

[2]An asterisk signifies that several "sites" were combined under this larger site name.

Table 1 (continued). Summary of observation sites (county totals in parentheses) and species[1] recorded on 30 June and 2-3 July 2003. X = adults observed or heard; T = tadpoles only; L = presence of a large chorus was noted; C = voucher specimen collected.

County	Site[2]	Ac	Ag	Ba	Bf	Bq	Bt	Gc	Hch	Hci	Hf	Hs	Pc	Pf	Po	Rca	Rcl	Rs
Greens-ville (22)	Jct. Rt. 301 x 646, N of Jarratt							X	X			X						
	Rt. 301, 1.6 km N jct. Rt. 646										L							
	Rt. 301, 0.8 km S jct. Rt. 189											L						
	Jct. Rt. 301 x 397				X			X	X		X	X						
	Rt. 614 near (N of) jct. Rt. 610				X			X			L							
	Rt. 614, 1.6 km N jct. Rt. 610	X			C			X	X[3]		L	X					X	
	Rt. 614, 0.6 km S jct. Rt. 615				X			X	X			L						
	Rt. 650, 0.8 km S jct. Rt. 627				X			X			X							
	Rt. 650, 1.6-2.1 km S jct. Rt. 627				X			X			X							
	Jct. Rt. 650 x 639		X		X			X										
	Rt. 639, 0.5 km E jct. Rt. 650 S	X			X			X										
	Rt. 650, 0.8-1.6 km S jct. Rt. 639							X										
	Rt. 650, 0.8 km N large quarry				X				X									
	Rt. 650 at stream/marsh, S quarry	L			X					C						X		
	Rt. 621, ca. 2.4 km W jct. Rt. 650	X																
	Jct. Rt. 621 x 633	X																
	Jct. Rt. 633 x 603 (nearby marsh)	X			X			X				L					X	
	Rt. 600, ca. 2.4 km W jct. Rt. 603	X			X													
	Rt. 627, 3.2 km N Barley								X									
	Rt. 603, 0.6-0.8 km N jct. Rt. 659				X													
	Rt. 603, 1.3 km N jct. Rt. 659				X													
	Rt. 601, 2.4-3.2 km W jct. Rt. 627				X													
Bruns-wick (2)	Rt. 602, 0.8 km E jct. Rt. 672		X															
	Rt. 690, near jct. Rt. 602				C													

[1]Species abbreviations: Ac = *Acris crepitans*, Ag = *A. gryllus*, Ba = *Bufo americanus*, Bf = *B. fowleri*, Bq = *B. quercicus*, Bt = *B. terrestris*, Gc = *Gastrophryne carolinensis*, Hch = *Hyla chrysoscelis*, Hci = *H. cinerea*, Hf = *H. femoralis*, Hs = *H. squirella*, Pc = *Pseudacris crucifer*, Pf = *P. f. feriarum*, Po = *P. ocularis*, Rca = *Rana catesbeiana*, Rcl = *R. clamitans*, Rs = *R. sphenocephala*.

[3]Includes one possible *Hyla versicolor*.

Status of the Queen Snake (*Regina septemvittata*) on the University of Richmond Campus

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On 1 August 1956, the late William S. Woolcott (ichthyologist and professor) and two of his students collected the first *R. septemvittata* in Westhampton Lake on the University of Richmond campus (formerly in the University of Richmond and then the College of William and Mary herpetological collections, now in the Smithsonian Institution, USNM uncatalogued). It was an adult male (342 mm SVL, 115 tail length). Jack Burch and Paul Brandt collected another on 21 June 1961 (male, 416 mm SVL, 149 mm tail length), and the late Gerald C. Schaffer found one on 16 May 1967 (Carnegie Museum of Natural History, CM 92014; male, 397 mm SVL, 141 tail length). This location was illustrated in Mitchell (1994) and Mitchell and Reay (1999), but not Tobey (1985). The surrounding area was considered urban even at the earliest collection date. Indeed, the Westhampton Lake area was a city park in 1914 when the university moved from downtown Richmond to this location (Bailey, 1939). The changes that have taken place on and around the campus since then have only made the area even more urbanized. For example, the spillway below the Westhampton Lake dam has been paved in concrete, the creek below the dam was channelized for about 80 m in the late 1980s, and additional buildings and homes have been built on and upstream of campus. The status of this population of relatively semi-aquatic, highly prey-specialized snakes has been of concern for several decades. I was on the University of Richmond campus from 1980 to 2004 and kept records of all reptiles found there and, except for the observation reported here, found no queen snakes and none was brought to me. This note illustrates that a chance encounter can provide important historical natural history information.

On 17 December 2001, a member of the campus maintenance crew gave me a juvenile female *R. septemvittata* that had an umbilical scar. It had been found that day in a pool of water in a drain hole on the bottom floor of the Robbins Athletic Center on the University of Richmond campus (37° 34' 49.05" N, 77° 32' 21.48" W). A map of the campus drainage

system showed a connection to Little Westham Creek through the sanitary sewer line above the lake. This creek drains into Westhampton Lake and is rocky in the upstream reach. There was little to no water flow in the creek during October and November because of a fall drought. I surmised that this juvenile somehow made its way into the building via the drainage system. Photographs of the snake were taken and it subsequently escaped; one was donated to the Virginia Herpetological Society photograph collection.

The observation of a juvenile from a litter produced in 2001 indicates that at least a small population of *R. septemvittata* remained extant through that year. It also shows that these snakes occupied Little Westham Creek above, as well as in Westhampton Lake, as noted in specimen records from 1956 and 1961 and likely for over a century. The current status of this population is unknown, especially following the flooding produced by Hurricane Isabel in September 2003. However, these observations suggest that queen snakes can persist in heavily urbanized areas as long as the streams contain rocky habitat and their crayfish prey.

Acknowledgments

I thank Mary Farrell for alerting me to the snake found on campus and the maintenance crew for capturing and holding it. George Zug checked on the status of the early specimens in the Smithsonian Institution's Museum of Natural History.

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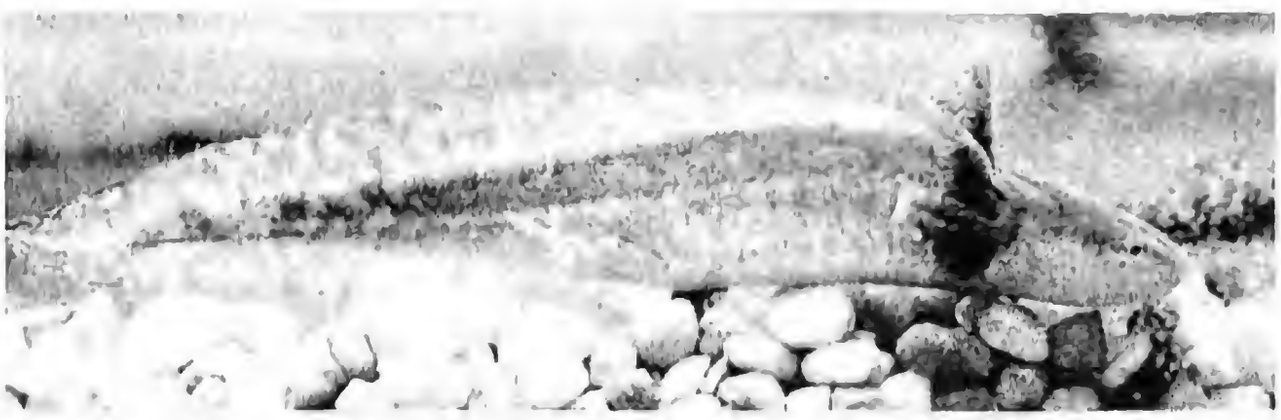
Field Notes

***Ambystoma talpoideum* (Mole Salamander).** VA: Pittsylvania Co., White Oak Mountain Wildlife Management Area (36° 49.140' N, 79° 18.412' W, elevation 184 m). 27 April 2005. Tyler R. Cassidy.

On 27 April 2005, ten paedomorphic mole salamanders (mean snout-vent length = 4.2 cm; mean total length = 7.6 cm; Table 1) were collected from four unbaited double-ended funnel traps at a pond in the White Oak Mountain Wildlife Management Area. The man-made pond is permanent and spring fed and has a maximum depth of 91 cm. Other species that inhabit the pond include *Ambystoma maculatum*, *Ambystoma opacum*, *Pseudacris crucifer*, *Pseudacris feriarum*, and *Notophthalmus viridescens*. No large fish species have been caught in this pond. This observation is significant because it represents the southernmost documented location of paedomorphism in Virginia and the first record of this life stage in Pittsylvania County (Hayslett, M. S. 2003. Natural History of the Mole Salamander *Ambystoma talpoideum* in Virginia. Master's thesis, Longwood University, Farmville, VA. 52 pp.).

Table 1. Body size (cm) of individual paedomorphic salamanders.

Snout-vent Length	3.8	3.9	4.1	4.1	4.2	4.3	4.3	4.4	4.7	---
Total Length	6.4	7.5	7.3	7.5	7.5	7.8	8.2	8.3	7.7	7.4



Paedomorphic *Ambystoma talpoideum*; photo by Jason D. Gibson.

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***Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad).** VA: Sussex Co., 2.5 km N Grizzard (36° 45' 02.6" N, 77° 25' 20.9" W). 19 April 2005. J. C. Mitchell and K. A. Buhlmann.

Narrow-mouthed toads in the mid-Atlantic portion of their range are summer breeders and call only during warm months of the year, generally May through July (Wright and Wright, 1949. Handbook of Frogs and Toads of the United States and Canada. 3rd Edition. Comstock Publishing Associates, Cornell University Press, Ithaca, NY. 640 pp.; Martof et al. 1980. Amphibians and Reptiles of the Carolinas and Virginia. University of North Carolina Press, Chapel Hill, NC. 264 pp.; Mitchell, in press. *Gastrophryne carolinensis*. In M. Lannoo [ed.], Status and Conservation of Amphibians in the United States. University of California Press, Berkeley, CA.). Most calls of this species that we have heard in Virginia are stimulated by warm late spring and summer rains. We are unaware of published call records for this species in early spring. Thus, the unmistakable call of *G. carolinensis* in southern Virginia in mid-April is of interest to those who study seasonal calling patterns.

On 19 April 2005, we heard one male *G. carolinensis* call twice from a roadside ditch across from a small cypress (*Taxodium distichum*) pond alongside Co. Rt. 611 at 1545 hr EDT. Air temperature was 30° C at that time. Microhabitat consisted of dry brush in a dry ditch adjacent to a loblolly pine (*Pinus taeda*) plantation. The forest across the road, in which the pond was located, had been clearcut 1-2 years previously. We could not locate the individual frog. Our observation represents an unvouchered record for southern Sussex County (Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.; Jeffreys, 2004. Field notes: *Gastrophryne carolinensis*. Catesbeiana 24: 79) and the earliest record for the call of this species in Virginia.

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***Hyla cinerea* (Green Treefrog).** VA: Prince George Co./City of Hopewell, 100 City Point Road. 28 September 2004. William R. Zevgolis, T.W. Ford Jr., and Jonathan D. Jeffreys.

On 28 September 2004 at approximately 0815h, Rodney Zevgolis noted a single male green treefrog clinging to the outer wall of the Hopewell Community Center, well hidden behind a garbage receptacle near the front entrance of the building. Weather was clear and air temperature was approximately 21° C. On several occasions I have noted green treefrogs in the vicinity of the center and especially clinging to the glass doors leading from the outer courtyard to the indoor swimming pool area. This specimen was captured by Zevgolis and subsequently retained by West Ford until processing on 29 September. Although the community center is located in the downtown area of the City of Hopewell, a very urban location, there is a small ephemeral pond located along the south lawn of the center between the tennis courts and a railroad yard. The pond is heavily laden with several varieties of wetland grasses. Presumably, this species has found a breeding pond at this unusual location. This is the first documented record for this species in Prince George County/City of Hopewell (Mitchell, J. C., and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). Several photographs were taken of the specimen, which was released at the pond. A color photograph has been deposited in the VHS archives.

JONATHAN D. JEFFREYS
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***Pseudacris brimleyi* (Brimley's Chorus Frog).** VA: Hanover Co., Ashland (37° 45' 59.90" N, 77° 27' 8.87" W). 31 March 2005. Joseph C. Mitchell.

Brimley's chorus frog has been documented for at least 16 counties and cities in Virginia, including eastern Hanover County (Mitchell, J. C., and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, Virginia. 122 pp.). The northernmost locality is in

southern Caroline County (Mitchell and Reay, *op cit.*). At least one locality lies west of the Fall Line in Chesterfield County (Mitchell, J. C. 1996. Natural history notes on the amphibians of a recently extirpated suburban wetland in central Virginia. Banisteria 7:41-46) and at least two lie close to or on the Fall Line in that county (Mitchell and Reay, *op cit.*). Additional observations of this late winter-breeding *Pseudacris* are warranted so that its distribution relative to the Fall Line in Virginia can be more clearly defined.

During the afternoon of 31 March 2005 I heard a chorus of *P. brimleyi* in a large powerline right-of-way in northeastern Ashland. The site lies 1.0 km NW of the junction of I-95 and VA Route 54. The right-of-way is maintained by mowing and there are many tire ruts, along with several low topographic areas that hold water for long periods of time. The chorus was located in a low topographic area lined with grasses and sphagnum. Other frogs calling at the same time were the upland chorus frog (*Pseudacris feriarum feriarum*) and southern leopard frogs (*Rana sphenocephala utricularia*). This location represents an unvouchered Fall Line record along the western margin of the range of *P. brimleyi* in Virginia. It is also the second site known to me for microsympatry of *P. brimleyi* and *P. feriarum* in central Virginia (Mitchell, *op cit.*).

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Richmond, Virginia 23173

***Pseudacris nigrita* (Southern Chorus Frog).** VA: Sussex Co., pine plantation off Co. Rt. 729, 2.0 km WNW Barrett Corner. 30 October 2003. Steven M. Roble.

The southern chorus frog (*Pseudacris nigrita*) was added to the known herpetofauna of Virginia in April 2003 on the basis of populations discovered in Prince George and York counties (Hobson, C. S. and E. C. Moriarity. 2003. Geographic distribution: *Pseudacris nigrita nigrita* [Southern Chorus Frog]. Herpetological Review 34: 259-260). These records represented a northern range extension of about 200 km from the nearest known populations in east-central North Carolina. Presumably,

this species was previously overlooked in southeastern Virginia by both amateur and professional herpetologists because of the similarity of its advertisement call with that of *Pseudacris feriarum* (upland chorus frog). Both species can inhabit the same wetland (Hobson and Moriarty, *op. cit.*). On the afternoon of 30 October 2003, I collected one adult *P. nigrita* of each sex while walking through a pine plantation in Sussex County, within 300 m of the Southampton County line and about 2.5 km SW of Airfield Pond. A potential breeding pond was observed within 100 m of both capture sites. This is the third known locality for *P. nigrita* in Virginia and a new county record. Approximately five additional populations of *P. nigrita* were documented in southeastern Virginia during the 2004-2005 breeding seasons (Hobson and Moriarty Lemmon, unpubl. data). I thank Emily C. Moriarty Lemmon (University of Texas) for verifying my identifications (via genetic analysis). Both specimens are deposited in the Texas Memorial Museum (TNHC # 63662-63663).

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217 Governor Street
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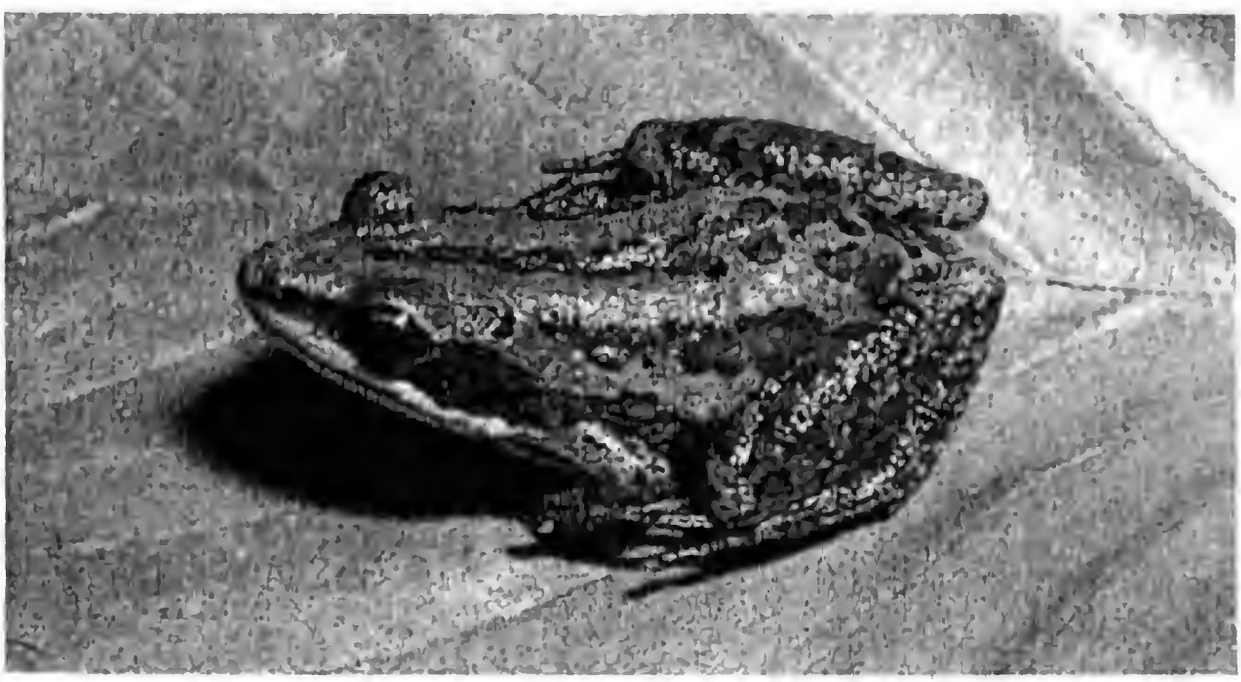

Pseudacris nigrita adult from Sussex County, Virginia; photo by Steven M. Roble.

***Scaphiopus holbrookii* (Eastern Spadefoot).** VA: Sussex Co., Chub Sandhill Natural Area Preserve, mixed pine hardwood forest and sand roads north of Co. Rt. 631, NNE of Peters Bridge. 2002-2003. Christopher S. Hobson and Sandra Y. Erdle.

The eastern spadefoot is a fossorial frog that tends to associate with the sandy soils of the Coastal Plain. There are numerous records from the eastern portion of Virginia, including all counties bordering Sussex County, except Dinwiddie (Mitchell, J. C., and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.). On several occasions during 2002 and 2003, *S. holbrookii* was detected at the Chub Sandhill Natural Area Preserve in Sussex County, Virginia. Five adults were collected between early April and mid-June 2002 in pitfall traps set in mixed pine-hardwood forest during that year (trapping period extended from early April to late November); three were captured between 15 April and 17 May. On 8 May 2003, recently transformed juveniles measuring ca. 10-15 mm SVL were found along sand roads and in adjacent mixed pine forest. These records constitute the first published account of *S. holbrookii* from Sussex County. Voucher specimens have been donated to the Virginia Museum of Natural History.

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***Agkistrodon contortrix mokasen* (Northern Copperhead).** VA: City of Suffolk, Great Dismal Swamp National Wildlife Refuge, service road near junction of Lynn Ditch and Jericho Ditch. 14 September 2004. Rick Browder.

On 14 September 2004 at approximately 1400 h, I observed a pair of northern copperheads copulating on a gravel portion of a service road (see photo). The ambient temperature was 24° C (75° F) with partly cloudy skies. Relative humidity was 89%, barometric pressure 30.26 in. /1024.6 hPa, and winds were out of the east northeast at 5.6 km/h (3.5 mph). I

observed them for about 5 min until the slightly larger snake (female?) moved slowly and pulled its mate into the thick underbrush along the road. Mitchell (1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington DC. 352 pp.) only lists two observed mating events for copperheads (both in spring) in Virginia.

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Mating pair of northern copperheads in the Great Dismal Swamp National Wildlife Refuge; photo by Rick Browder.

***Farancia erytrogramma erytrogramma* (Rainbow Snake).** VA: Hanover Co., 4.5 km SE Hanover (37° 44' 21.56" N, 77° 20' 8.10" W). 12 June 2004. W. B. Hadley.

Distribution maps of the rainbow snake show a spotty range in most states in which it occurs, including Virginia (Mitchell, 1982. *Farancia erytrogramma*. Catalogue of American Amphibians and Reptiles 293:1-2; Mitchell. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.; Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.). The often-scattered localities illustrated on such maps are more a result of the rarity of encounters for this secretive species than search effort and true biogeography. Thus, all county and distribution gap records for this snake are of interest.

On 12 June 2004 W. B. Hadley found an adult male *F. erytrogramma* alive on Co. Rt. 605 about 2.7 km east of its junction with US Rt. 301 in Hanover County, Virginia. The closest wetland derived from maps is an extensive set of marshes in the Sutton Neck area of the Pamunkey River. E. D. Cope (1895. A new locality for *Abastor erythrogrammus*. American Naturalist 29:588) found a rainbow snake on the King William County side of this river in 1895. This location fills a hiatus between a locality along the James River in western Henrico County and one in western New Kent County (Mitchell, 1994. *op cit.*; and Mitchell and Reay, 1999. *op cit.*). It also provides a new record for Hanover County. The snake was photographed and released at the capture site. A voucher slide has been submitted to the Virginia Herpetological Society photographic collection.

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***Regina septemvittata* (Queen Snake).** VA: Hanover Co., jct. US Rt. 33 and South Anna River, 3.36 km SE Goodall (37° 46' 33.89" N, 77° 36' 43.50" W). 2 June 1997. Robert H. Miller, Jr.

Queen snakes have been found relatively commonly in the western Piedmont and mountain regions of Virginia and only sporadically in the eastern portion of the state (Mitchell. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.; Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.). Reproductive data for this snake in Mitchell (*op. cit.*) was based on 11 females in museum collections, nearly all of which were from western counties. Here I provide locality and litter size information on a female found near the Fall Line in Hanover County.

On 2 June 1997, R.H. Miller, Jr. found a live, gravid female *R. septemvittata* (461 mm SVL, 93 mm tail length, 61.5 g gravid mass) near the South Anna River that contained 9 embryos. Litter size based on palpation was close to the mean of 9.8±2.5 offspring reported by Mitchell (*op cit.*). The female had a fungal infection of unknown etiology on the dorsum of the head. This observation represents the second locality record for Hanover County, Virginia (Mitchell and Reay, *op. cit.*). The snake was released at the capture site.

I thank R. H. Miller, Jr. for providing the locality and reproductive observation.

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***Regina septemvittata* (Queen Snake).** VA: Stafford Co., 0.8 km W jct. Co. Rts. 611 and 728, 1 km NW Mountjoy Store (38° 28' 34.32" N, 77° 21' 09.46" W). 19 July 2004. Garrie Rouse.

Locality records for the queen snake in the upper Coastal Plain are widely scattered within the three counties in which it has been documented

(Mitchell. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.; Mitchell and Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication No. 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.). These counties are Caroline, Fairfax, and Prince William. Here we provide a new locality near the Potomac River in Stafford County, Virginia.

On 19 July 2004, GR photographed an adult *R. septemvittata* on an alder (*Alnus serrulata*) branch in the scrub-shrub zone at the edge of emergent wetlands developed along an unnamed stream that empties into the Potomac River at Widewater. This observation is 4.8 km SSE of a record on US Marine Corps Base Quantico on the Prince William County side of Chopawamsic Creek (Mitchell, *op cit.*; JCM pers. obs.). Our record represents the first confirmation for Stafford County. The snake was not captured; a copy of the digital photograph is in the Virginia Herpetological Society photograph archives.

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***Eumeces fasciatus* (Five-lined Skink).** VA: Pittsylvania Co., 181 Samuel Court. 9 August 2003. Jennifer G. Gibson and Jason D. Gibson.

On 9 August 2003 a juvenile *Eumeces fasciatus* was observed dangling by its tail from the web of an American house spider (*Achaearanea tepidariorum*). The event must have occurred moments before my wife initially observed the event. After arriving where the lizard was dangling, we both saw the spider climbing down toward the entangled lizard. The spider touched the lizard's tail and immediately went back up the strand. The presence of my wife and I may have caused the spider to retreat. I left the lizard for a few minutes to retrieve my camera. The spider never again tried to investigate the lizard. While taking pictures I began to deduce how the lizard became entangled. This species of lizard is very commonly seen foraging on the bricks that comprise the walls of my house. Most likely it was running along the bricks and touched a sticky strand of web silk attached to the bricks and got the strand wrapped around its tail. The

animal then slipped off the bricks and was suspended by a strong, non-sticky supporting strand of web silk. Although this is unlikely to have become a predation event, it had the potential of being a mortality event. The lizard was suspended 2.55 m above a black top paved driveway. If the spider had cut the lizard free or the lizard wiggled free, the headfirst drop probably would have been fatal. Spiders have not been recorded preying on lizards in Virginia (Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.) but they have been recorded as predators of various lizard species in other places (Pianka, E. R., and L. J. Vitt. 2003. Lizards: Windows to the Evolution of Diversity. University of California Press, Berkeley, CA. 333 pp.). It still remains unknown if *A. tepidariorum* is a predator of *Eumeces* or a major cause of mortality to juveniles of this species. Given the common nature of this spider and large populations, it may be responsible for the mortality of small numbers of these and other lizards. A digital photograph has been deposited in the CalPhoto VHS digital archives and the VHS digital archives at Liberty University.

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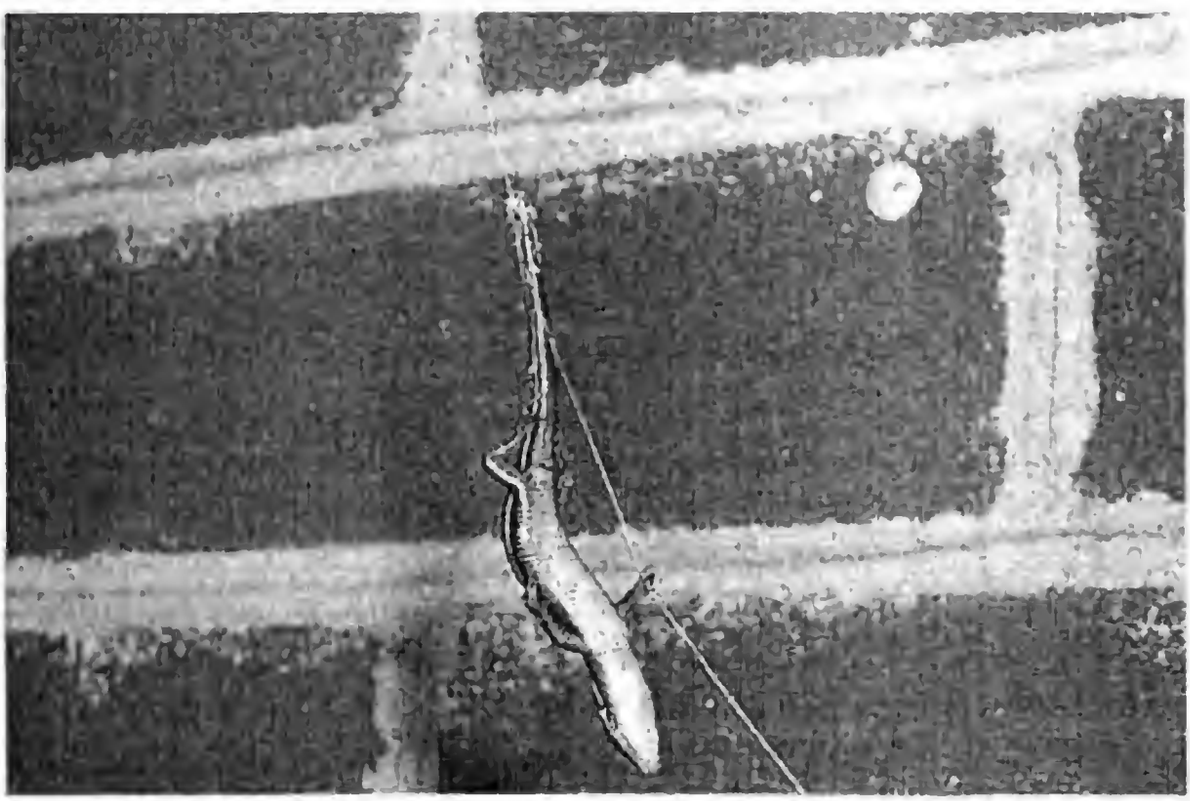

Juvenile *Eumeces fasciatus* in house spider web; photo by Jason D. Gibson.

***Pseudemys concinna concinna* (Eastern River Cooter).** VA: Prince George Co./City of Hopewell, Crystal Lake, north side of River Road opposite Mathis Park. 22 July 2004. Jonathan D. Jeffreys.

On 22 July 2004 at approximately 1544h a male eastern river cooter was noted in a turtle trap placed in old Crystal Lake in the City of Hopewell on the afternoon of 20 July. This man-made pond is approximately 200 meters in diameter and served as the filtration/replenishment water source for the public swimming area just opposite River Road during the 1950s through the early 1960s. Although the south side area of River Road has recently been developed (a freshwater pond, hiking trail, picnic pavilions, and parking lot have been put in by the City of Hopewell), this old pond has been left undisturbed for some 40 years. I have frequently noted numerous turtles basking on fallen logs in this pond. The pond is surrounded by pine and hardwood deciduous forest. The pond is also adjacent to Cabin Creek, a tributary of the Appomattox River (the river is approximately 1.5 km north of this location). Air temperature was approximately 33.1°C. Weather was dry and clear. Morphometric data was recorded and several photographs were obtained. This specimen represents the first documented record for this species in Prince George County/City of Hopewell (Mitchell, J. C., and K. K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Special Publication Number 1, Virginia Department of Game and Inland Fisheries, Richmond, VA. 122 pp.; Mitchell, J. C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, DC. 352 pp.). The specimen was released back into the pond. Color photographs of the specimen have been deposited in the VHS archives.

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President's Corner

Please join us June 3-5 for what should be a great spring meeting and herp survey on the Rappahannock River Valley National Wildlife Refuge in Richmond County. USFWS biologist Sandy Spencer and her co-workers will be our hosts as we search a fascinating array of wetland and terrestrial sites in a herpetologically over-looked section of Virginia. Nearly two-thirds of the expected herp species for Richmond County have yet to be verified. I suspect we'll add quite a few county records by the end of the weekend!

An exploratory tour of the refuge revealed a great variety of wetland habitats, from tidal freshwater environs, to extensive terraced beaver-ponds, to vernal pools. The upland, native wet grasslands were intriguing as well, as were the steep, mature beech ravine forests, with a mountain laurel and American holly under-story. Although a long-settled region of Virginia, much of the land we viewed seems to have been well conserved by the landowner families over the generations.

Headquarters for our VHS event will be the Heritage Park Resort. They have meeting, lodging (cabins), camping, and recreational facilities - and even a vineyard & winery. Not only is Heritage Park near the NWR, but offers direct access to Cat Point Creek, an intriguing herp survey site. Canoes are available for rent too. Restaurants, as well as additional lodging facilities, are located nearby in the towns of Warsaw and Tappahannock.

As usual, on Friday evening we'll conduct our VHS spring business meeting, slide show of expected species, and a planning & organization session for the next day's activities. Our survey work will run all day long on Saturday, and will continue on Sunday morning for those who can stay over. We'll divide into several teams, with sections of the refuge assigned to each for investigation. Each team will be provided with topographic maps and a GPS receiver (you are also welcome to bring your own). We'll be marking specific coordinates of captures, photos, and sightings and will transfer GPS data to electronic mapping programs.

Those are the plans for now. Be sure to review the details listed in the Spring 2005 Meeting Announcement, posted elsewhere in this edition of *Catesbeiana*. For the latest updates, be sure to check the VHS website at:

http://fwie.fw.vt.edu/VHS/. Also see the links to RRV-NWR and to Heritage Park.

We hope you will join us June 3-5. **Please pre-register** with me at *frogholler@tds.net* so that we'll have an idea of who and how many will be attending. Let me know if you have any questions or suggestions.

Mike Clifford
VHS President

Virginia Herpetological Society
Minutes of the Fall Meeting
Virginia Living Museum
Newport News, Virginia
October 2, 2004

Mike Clifford opened the meeting at 1:20 pm at the Virginia Living Museum with about 30 members and guests in attendance. After a welcome to all, the Executive Council was introduced. Mike then called for the various reports.

Paul Sattler gave the Secretary/Treasurer's report. The minutes of the Spring 2004 meeting at Staunton River State Park were published in *Catesbeiana* 24(2). The Treasurer's report was also published in that issue. Since September, printing and postage costs for *Catesbeiana* 24(2) were paid, reducing the balance from $5973.64 to about $5,600. This leaves the treasury in good position as most of our revenue comes in the beginning of the year with membership renewals.

Steve Roble gave the *Catesbeiana* report. There were 175 copies printed. Volume 24(2) was one of the largest issues printed. Steve called for continued submission of Field Notes and illustrations. The Spring 2004 survey at "The Cove" in Halifax County is expected to be the lead article for the Spring 2005 issue. Steve called for early submission of materials as last minute submissions cause delays in getting *Catesbeiana* out and may cause materials to be "bumped" to later issues. Mike Clifford noted that there did not seem to be problems with insufficient submissions as has sometimes plagued past issues. Steve pointed out that the long-term

viability of the BioBlitz springtime surveys, which provided the lead article for several Fall issues, was not certain and could again cause problems in the future.

Shelly Miller gave the Newsletter report. She thanked Susan Watson for filling in while Shelly had her baby (who was present as the youngest in attendance). There were 103 copies of the July Newsletter emailed out, and 65 hard copies mailed. Because the link is emailed to members in order for them to download an electronic copy from the Web Site, it is important to inform the Secretary of any email changes. Since the July issue was the first one downloaded from the Web Site, there were a few problems with the download. However, these were fixed quickly and the procedure seems to work nicely and is ready for future issues. Shelly inquired about the status of the proposal to send the Newsletter free to Nature Centers. Mike Hayslett responded that he and Kory Steele are still working on the list of potential organizations which might qualify, so this decision is still pending.

John White gave the Web Site report. Both the Tobey Atlas and the Mitchell and Reay Atlas have been digitized and are now available online. A snake identification section has also been added. Mike Clifford said that the number of snake identification questions coming to him was dramatically reduced about the same time that this page came on line. Some new photographs were received to fill a few holes in the taxonomic page, but there are still some species for which the Site does not have any pictures. John is working on posting the Table of Contents from previous issues.

Jason Gibson was unable to attend the meeting, but had sent a Publications Committee report. Paul Sattler summarized the report. There is currently no one responsible for archiving the printed or digital information coming into the VHS. The Virginia Museum of Natural History in Martinsville, which is the official archive site for the society, does not have a herpetology curator. Dr. Richard Hoffman has been volunteering to do some of the cataloging of specimens, but the pictorial and printed materials coming in are simply being placed in a drawer for later work. The Committee recommended that the VHS President immediately create a position for a digital archivist. This individual would develop a computerized database for the entry of slides, digital

images, photographs, and digital and audio recordings. A record of the taxonomic and collection data would be entered into a searchable computer database along with an entry for the location of the material. The value of hard copies of digital photographs, the accessibility of the database, and whether the data would also be placed on the CalPhoto site was discussed.

The Committee also recommended the appointment of a paper archivist. This individual would collect a complete set of published Newsletters, *Bulletins* and *Catesbeiana* issues, maintain and add new copies to this collection, and begin to compile a cumulative index of these materials. Discussion followed on the source of these materials and how extensive and what type of index would be compiled. The matter of how requests for back issues of *Catesbeiana* were answered was raised. Paul Sattler replied that the Secretary/Treasurer currently houses the back issues and has been able to fill from these stocks all requests to date.

Mike Clifford had brought to the meeting his set of early Bulletins and issues of *Catesbeiana*. These were given to Paul Sattler to compile as complete a set as possible between these and the back issues, and to report back if this was successful or not. Questions were raised as to whether these might be digitized and placed on the Web Site. The cost of doing so was questioned considering that there are so few requests for back issues. It was pointed out that perhaps there are few requests for back issues because there is not a cumulative index to inform members and others as to what materials are available. In the end, Paul Sattler was appointed digital archivist and asked to develop the computerized database to house non-paper materials. Jason Gibson had expressed interest in the paper archivist position, however, Mike Clifford was not willing to give out this appointment until the individual was present and could confirm their interest in the face of the workload involved. Tim Brophy volunteered to help Paul Sattler begin work on all the archival materials until the next meeting when the issue could be further discussed.

Sandy Spencer of the Rappahannock River Valley National Wildlife Refuge gave a presentation requesting that the VHS survey their several tracts of land during the Spring 2005 survey. They currently have about 6,500 acres of land along both banks of the Rappahannock River with a variety of habitats. The data gathered would be used to help the Refuge

develop their Comprehensive Conservation Plan. There is a headquarters in Wilna, with accommodations possible with cabin rental from Heritage Park Resort, camping at Westmoreland State Park, and a meeting hall at Cat Point Creek. Tentative agreement was given to survey this site. Kory Steele was appointed head of the Committee to plan the Spring Survey. Mike Clifford will look into the availability of the cabins and set the date for the survey based on cabin availability.

The meeting adjourned for a break to start the silent auction and resumed for the paper session. Presentations included: Vincent Passaro, "Radiotelemetry of Eastern Cottonmouths at Newport News Park, the northern limit of their range." Timothy P. Christensen, "Reptiles and Amphibians at the US Army Transportation Center". Amy Martin, "Virginia Fish and Wildlife Information Service, an update for VHS members". Susan Watson, "Virginia's Herpetofauna and the Comprehensive Wildlife Conservation Strategy" and Deborah A. Hutchinson, "Vasculature of the parotoid glands of four species of toads (Bufonidae: *Bufo*)". Following the presentations, the silent auction was ended and Kory Steele gave a guided tour of the Virginia Living Museum.

Paul Sattler
VHS Secretary/Treasurer

Dues Reminder

Membership in the Virginia Herpetological Society is on a calendar year basis (January-December). **If the date on your mailing label is 2004, our records indicate that you have not paid dues for 2005 and this will be the last society publication that you will receive unless you renew your membership.** See the last page of this bulletin for the membership application/renewal form. Save postage by paying your dues at the Spring Meeting.

Virginia Herpetological Society
Treasurer's Report
April 2005

Previous Checking Balance September 2004	$5,973.64
Receipts:	
September Dues	$ 90.00
October Dues	$255.00
November Dues	$ 75.00
December Dues	$ 98.00
January Dues	$423.00
February Dues	$ 75.00
March Dues	$210.00
April Dues	$ 55.00
Fall Teachers Workshop Fees	$ 90.00
T-Shirt Sales	$ 43.00
Fall Silent Auction	$109.50
Donation	$ 25.00
Total Receipts	$1548.50
Disbursements:	
Catesbeiana 24(2) – Printing/Postage	$468.91
Fall Meeting Food	$ 93.80
Total Disbursements	$562.71
Balance on Hand April 2005	$6,959.43

Paul Sattler
VHS Secretary/Treasurer

Virginia Herpetological Society
2005 Spring Meeting and Survey

Richmond County
Rappahannock River Valley National Wildlife Refuge
and
Heritage Park Resort

During this year's field survey we will investigate the herpetofaunal assemblage of an intriguing array of wetland and terrestrial habitats on the Rappahannock River Valley National Wildlife Refuge and nearby sites. Nearly two-thirds of the sixty expected reptile and amphibian species for Richmond County have yet to be verified. Thus the opportunity for new county locality records is great. Headquarters for the spring meeting & survey will be at the Heritage Park Resort, located between the refuge and the nearby towns of Warsaw and Tappahannock.

For more details about the refuge, see
http://refuges.fws.gov/profiles/index.cfm?id=51622 .
For more details about Heritage Park, see http://www.heritagepark.com/ .

Pre-registration: We are requesting pre-registration for the spring meeting/survey weekend to help us in planning and help us to alert attendees of any opportunities or changes pertaining to the event. Please contact Mike Clifford if you are planning to attend at frogholler@tds.net or 11131 Amelia Springs Road, Jetersville, VA 23083.

VHS 2005 Spring Meeting & Survey Schedule:

Friday, June 3	**Heritage Park - Great Hall Auxiliary Room (VHS Headquarters)**
3:00-7:00 pm	Arrival and check-in GPS / map training provided as needed
7:00 pm	Business meeting Slide show of expected species Survey planning and coordination

Spring Meeting Announcement

Saturday, June 4	**Heritage Park and Rappahannock River Valley NWR**
8:00 am	Assemble at Great Hall Auxiliary Room, Heritage Park (VHS HQ) Travel to survey locations. Herp survey work.
12:00 noon	Lunch in the field Continue herp survey work
5:00 pm	1st Rendezvous (for those leaving) at Great Hall Auxiliary Room (VHS HQ) Survey tabulation and analysis; photographs.
5:30 pm	Supper on-your-own (variety of options)
7:00– 9:00 pm	2nd Rendezvous at Great Hall Auxiliary Room (VHS HQ) Survey tabulation and analysis; photographs
9:00 - until	Night survey options

Sunday, June 5	**Heritage Park and Rappahannock River Valley NWR**
8:00 am	Assemble at Great Hall Auxiliary Room, Heritage Park (VHS HQ) Travel to survey locations to continue herp survey work
11:30 am	Final Rendezvous - Great Hall Auxiliary Room (VHS HQ) Survey tabulation and analysis; photographs
12:00 noon	Depart

Accommodations
VHS 2005 Spring Meeting & Survey

Heritage Park Resort will be our VHS headquarters for the weekend. Their Great Hall Auxiliary Room is an air-conditioned, herp-friendly meeting room that we have reserved for the duration.

Lodging & Camping

Heritage Park Resort – contact them at **1-800-335-5564** to reserve a cabin or campsite. Be sure to mention that you are with VHS, since they are holding all of their cabins for us that weekend. See their website at http://heritagepark.com/index.html for more details. For non-related adult occupants, three is the recommended number per cabin. Four or five is fine for families. (Mike Clifford has reserved one of the cabins and is looking for cabin-mates to share the expense – contact him at *frogholler@tds.net*). Motels and restaurants are located nearby in Warsaw and Tappahannock.

Directions To Heritage Park Resort
(http://heritagepark.com/directions.htm)

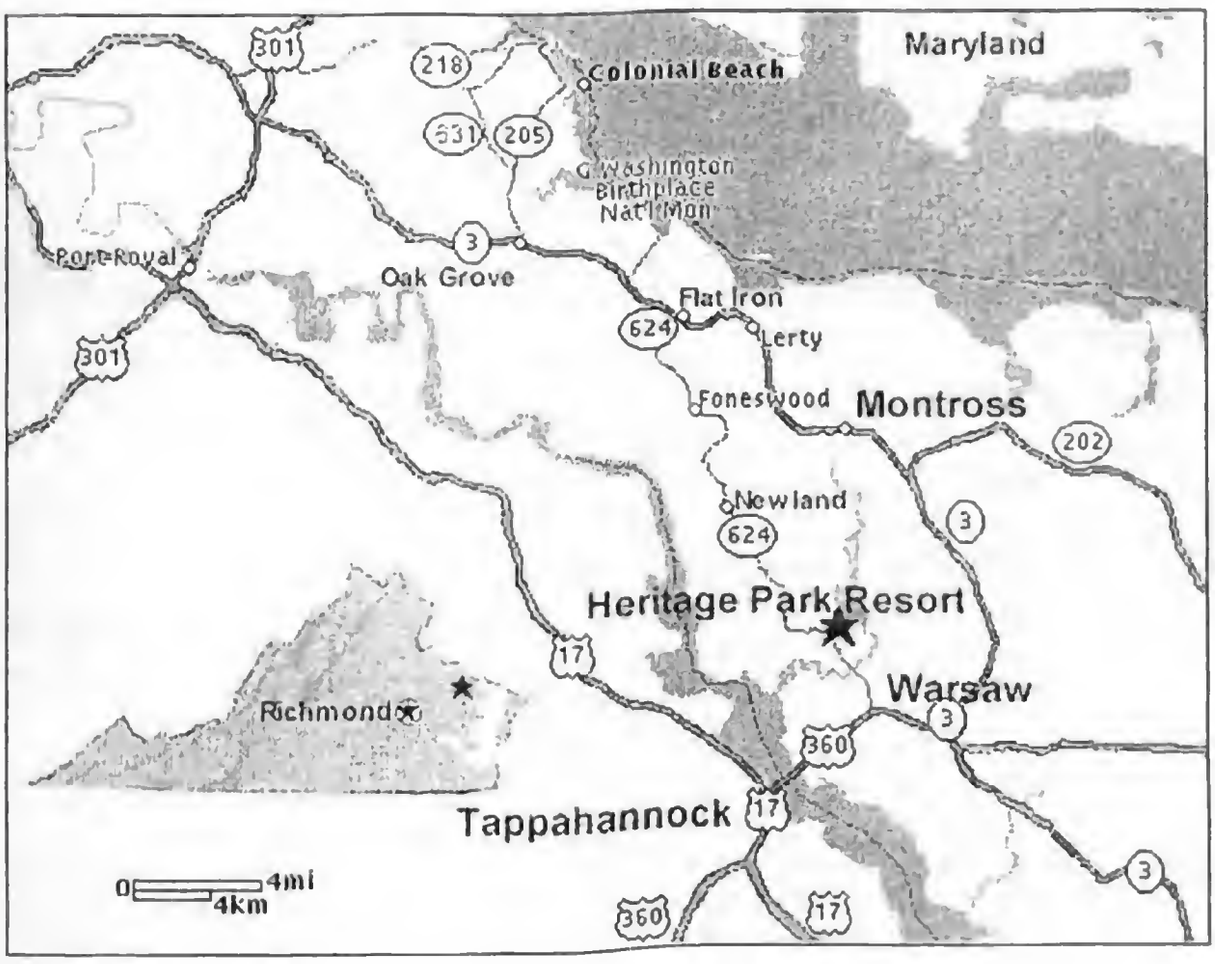
- From Richmond take I-64 East to Route 360 East (Mechanicsville I-64 exit #192 or I-295 exit #37) to Tappahannock - 38 miles, Turn *right* on 360 East, go over the Downing Bridge (Rappahannock River), proceed for 3 miles then turn *left* at Newland Road (Route 624). The Resort is on the *right* side of Route 624, 2.5 miles from Route 360.

- From Northern Virginia/DC/Fredericksburg take I-95 to the Massaponax (Route 17 South/Route 1) exit #126. At the exit ramp turn onto Route 1 South for approximately 1 mile. Turn *left* turn onto Route 17 South and follow Route 17 South to Tappahannock - for 47 miles. At the 2nd light in Tappahannock turn *left* onto Route 360 East and go over the Rappahannock River. Proceed for 3 miles then turn *left* at Route 624 (Newland Road). The Resort is on the *right* side of Route 624, 2.5 miles from Route 360.

- From Fredericksburg (OPTION # 2) From I-95 take Route 3 East at Fredericksburg, follow Route 3 until 2 miles past George Washington's Birthplace, turn *right* on Route 624 (Flat Iron Road). The Resort is on the left side of Route 624, 15 miles from Route 3.

- From southern Maryland take Route 301 across the Potomac River Bridge into Virginia. Follow Route 301 for 12 miles, then turn left on Route 3 East. Follow Route 3 (for about 15 miles) until 2 miles past George Washington's Birthplace, then turn *right* on Route 624 (Flat Iron Road). The Resort is on the left side of Route 624, 15 miles from Route 3.

- From Virginia Beach take I-64 West to Route 17 North to Tappahannock for 70 miles, Turn *right* on 360 East, go over the Downing Bridge, proceed for 3 miles then turn *left* at Route 624 (Newland Road). The Resort is on the right side of Route 624, 2.5 miles from Route 360.



MEMBERSHIP APPLICATION

I wish to _____ initiate _____ renew membership in the Virginia Herpetological Society for the year _____ 2005 _____ 2006 _____ 2007.

Name _____

Address _____

_____

_____ Phone _____

email address: _____

Dues Category: ____ Regular ($15.00)
____ Family ($20.00)
____ Under 18 ($8.00)
____ Life ($225.00)

Interests: ____ Amphibians ____ Reptiles
____ Distribution ____ Research
____Captive Husbandry
___ Specifically _____

Make checks payable to the Virginia Herpetological Society and send to: Dr. Paul Sattler, VHS Secretary/Treasurer, Department of Biology, Liberty University, 1971 University Blvd., Lynchburg, VA 24502

Visit the VHS web site at: http://fwie.fw.vt.edu/VHS/

Field Notes

The field notes section of *Catesbeiana* provides a means for publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other topics are welcomed. Field Notes will usually concern a single species. The format of the reports is: scientific name (followed by common name in parentheses), state abbreviation (VA), county and location, date(s) of observation, observer(s), data, and observations. The name(s) and address(es) of the author(s) should appear one line below the report. Consult the editor if your information does not readily fit this format. **All field notes must include a brief statement explaining the significance of the record** (e.g., new county record) **or observation** (e.g., unusual or rarely observed behavior, extremely early or late seasonal record, abnormal coloration, etc.). Submissions that fail to include this information are subject to rejection. Relevant literature should be cited in the body of the text (see Field Notes in this issue for proper format). All submissions will be reviewed by the editor (and one other person if deemed necessary) and revised as needed pending consultation with the author(s).

If the field note contains information on a **new county (or state) record, verification is required in the form of a voucher specimen** deposited in a permanent museum (e.g., Virginia Museum of Natural History) or a **photograph** (print, slide, or digital image) **or recording** (cassette tape or digital recording of anuran calls) deposited in the archives of the Virginia Herpetological Society. Photographs and recordings should be sent to the editor for verification and archiving purposes; the identity of voucher specimens must be confirmed by a museum curator or other qualified person. Include the specimen number if it has been catalogued. Prospective authors of distribution reports should consult Mitchell and Reay (1999. *Atlas of Amphibians and Reptiles in Virginia*), Mitchell (1994. *The Reptiles of Virginia*), and Tobey (1985. *Virginia's Amphibians and Reptiles: A Distributional Survey*) **[both atlases are available on-line on the VHS website]** as well as other recent literature to determine if they may have a new county record. New distribution records from large cities that formerly constituted counties (Chesapeake, Hampton, Newport News, Suffolk, and Virginia Beach) are acceptable, but records from smaller cities located within the boundaries of an adjoining county will only be published if the species has not been recorded from that county. **Species identification for observational records (e.g., behavior) should be verified by a second person whenever possible.**

PHOTOGRAPHS

High contrast photographs (prints, slides, or digital images) of amphibians and reptiles will be considered for publication if they are of good quality and are relevant to an accompanying article or field note. Prints should be on glossy paper and no larger than 5 x 7 inches. Published photographs will be deposited in the archives of the Virginia Herpetological Society.